

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No. 10/753,474
Attorney Docket No.: Q79100

REMARKS

Claims 1-12 are all the claims pending in the application. By this Amendment, Applicant editorially amends claims 1-9, and 11. Claims 1, 9, and 11 are also amended to broaden the scope of the claims. In addition, by this Amendment, Applicant cancels claims 10 and 12 without prejudice or disclaimer. Applicant also adds claims 13-18. Claims 13-18 are clearly supported throughout the specification, *e.g.*, ¶¶ 50 to 54 of the specification. Reconsideration of the application and allowance of all claims are respectfully requested in view of the above amendments and the following remarks.

Preliminary Matters

As preliminary matters, the Examiner has acknowledged Applicant's claim to foreign priority and has indicated receipt of the certified copy of the priority document. The Examiner has also returned the initialed form PTO/SB/08 submitted with the Information Disclosure Statement filed on January 9, 2004.

The Examiner has not indicated acceptance of the drawings filed on January 9, 2004. Applicant respectfully requests the Examiner to indicate acceptance of the drawings with the next Patent Office Communication.

Claim Rejections under 35 U.S.C. § 103

Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,665,280 to Forssell (hereinafter "Forssell") in view of U.S. Publication No. 2004/0132441 to Livet (hereinafter "Livet"). Applicant respectfully traverses these grounds of rejection in view of the following comments.

Of these rejected claims, only claims 1, 10, and 12 are independent. Independent claims 1, 10, and 12 include, in some variation, “a request for the setting-up or reconfiguration of a radio bearer for a packet session for a mobile station, said request comprising first information derived from quality of service information contained in a corresponding request received by said core network entity; adding, by said core network entity, to said request second information, that is known at a level of said core network.”

The Examiner acknowledges that Forssell does not disclose or suggest having a request with the first information and adding the second information, as set forth in some variation in these independent claims (*see* pages 2-3 of the Office Action). The Examiner, however, alleges that Livet cures the deficient teachings of Forssell. Applicant has carefully studied the combined teachings of Forssell and Livet. Applicant respectfully submits that both references, taken alone or in any conceivable combination, fail to disclose or suggest having a request for setting-up or reconfiguring a radio bearer that would include the first and second information, as set forth in these independent claims.

In an exemplary, non-limiting embodiment, it is disclosed that in supporting real-time services, it is important to know the cell in which the mobile station (MS) is, and its capabilities (e.g., if it is EGPRS capable or not), the state of the cell (e.g., how loaded it is), and the MS capabilities (e.g. if the MS is EGPRS capable or not, and the MS’s multislot class). Accordingly, in an exemplary, non-limiting embodiment of the present invention, a core network entity such as an SGSN included in a request for setting up or reconfiguring a packet session first information derived from quality of service information received in the request from the MS and

adds to the request second information, that is known in the SGSN, such as access capabilities of the MS. Accordingly, this request is sent to a radio access network entity such as a base station subsystem (BSS), which uses the first and second information to determine whether a PDP context session may be established and performs the admission control procedure based on these information. That is, the BSS will permit or deny establishing a PDP context session based on this information included in the request from the SGSN. It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

Forssell is unrelated to the problem at hand and its relevance is not understood. Forssell discloses a mapping mechanism for multiple temporary block flows (TBFs) between various layers of the network. That is, Forssell discloses transmitting data packets via TBFs, where when transmitting packets between the MS and the network no information regarding other existing TBFs is required as long as the mobile station and the network are able to correctly associate a received packet to the correct TBF based on the information (radio link control) received with the packet (col. 2, lines 25 to 54). Clearly, Forssell does not disclose or suggest a setup request having a first information and adding the second information to the setup request.

With respect to Forssell, the position set forth in the Office Action is inconsistent, in that with respect to claim 1, the Examiner acknowledges that Forssell fails to disclose or suggest a request having the second information; yet, with respect to claim 2, the Examiner alleges that Forssell discloses the request having second information (*see* page 3 of the Office Action).

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Applicant respectfully submits that Forssell does not disclose or suggest the request, as set forth in claim 1.

That is, Forssell discloses mapping data packets to a TBF based on the information in the header of the data packet or included with the packet. Forssell further discloses that the information can include Service Access Point Identifier information carried in an address field of each Logical Link Control frame or Quality of Service information. The information may be Packet Flow Context information that reflects specific Quality of Service values. The information may also be embodied as Radio Link Control Acknowledge mode information and Radio Link Control Un-Acknowledge mode information. In a further embodiment the information can include Flow Identifier information that is inserted into each Packet Data Unit (col. 3, lines 4 to 29).

Forssell, however, does not disclose or suggest that the Quality of Service information is information being added at the core network level *e.g.*, by SGSN, that has this information. Furthermore, this information is included with a data packet in an established PDP context and not in the request to establish a PDP context. That is, Forssell relates to mapping TBFs once a radio bearer has been set-up or already established for a packet session for a mobile station and does not relate to setting up or reconfiguring a radio bearer for a packet session for a mobile station. Moreover, in Forssell, only a radio access network entity is concerned with the handling of TBFs *i.e.*, the handling of TBFs does not require any procedure between a core network entity and a radio access network entity. Accordingly, Forssell fails to disclose or suggest a request

having a first information and a second information added by the core network entity that is known at the core network level.

The Examiner further alleges that Livet cures the deficient teachings of Forssell (*see* page 3 of the Office Action). Livet, however, only discloses a separate radio resource management component (RMM) utilizing finite state machines, preferably dividing RMM functions on the basis of Real Time (RT) and Non Real Time (NRT) communications and also UpLink (UL) and DownLink (DL) functions to promote Quality of Service (QoS), maximum system capacity and stability and coordination. (*see* Abstract). That is, Livet discloses using finite state machines to allow the RMM make optimal decisions in regards to managing resources of the radio system (¶¶ 13-16). Livet, however, is silent as to having a request to set-up or reconfigure bearer session having first information which is derived from the request received by the entity and adding to this request second information known at the level of this entity.

The Examiner alleges that ¶¶ 15-18 of Livet disclose these unique features of the independent claims 1, 10, and 12 (*see* page 3 of the Office Action). ¶¶ 15-18 of Livet, however, only disclose an RMM having a plurality of finite state machines for controlling radio resources for a specified geographic area serviced by the telecommunication system. Each FSM is configured with a plurality of states where a selected set of functions are implemented based on state based parameters. That is, in Livet, the RMM executes certain functions based on the state and does not add any information to a request. In Livet, the list of functions varies depending on the load (table 1, ¶ 46). That is, the RMM does not generate a request adding second information

known at its level but rather executes a particular function based on the load *e.g.*, uses maximum bit rate for user admission when the load is low (§ 48).

Moreover, in Livet, the RMM is a radio network controller (a base station) and not the core network entity (§ 10). That is, Livet only discloses the RMM monitoring the wireless communication and toggling a state based on the wireless communication load. In Livet, however, there is no request for a data session that would include the first information and add second information. In short, Livet fails to cure the deficient teachings of Forssell.

In summary, Forssell is no more pertinent than the art already acknowledged in the present application. It discusses GERAN access technology and a mobile terminal engaged in data transfer, and the various passages of Forssell cited by the examiner cite this technology, but this general subject matter is admittedly not new. Forssell does not suggest a core network entity sending a radio bearer setup message to a RAN entity where the second information known at its level is added to the setup message. Livet et al teaches a radio resource management method, but says nothing to suggest a core network entity sending a radio bearer setup message to a RAN entity where the second information known at its core network level is added to the setup message. The passages of Livet et al cited by the examiner talk about a Finite State Machine, but say nothing about a message from a core network entity to a RAN entity, and certainly nothing about specific information to be included in such a message.

Therefore, “sending, by a core network entity of said system, to a radio access network entity of said system a request for the setting-up or reconfiguration of a radio bearer for a packet session for a mobile station, said request comprising first information derived from quality of

service information contained in a corresponding request received by said core network entity ; adding, by said core network entity, to said request second information, that is known at a level of said core network entity,” as set forth in some variations in claims 1, 9, and 11 are not disclosed by the combined teachings of Forssell and Livet. Forssell and Livet, taken alone or in any conceivable combination. For at least these exemplary reasons, claims 1, 9, and 11 are patentable over the combined teachings of Forssell and Livet. Therefore, Applicant respectfully requests the Examiner to withdraw these rejections of claims 1, 9, and 11. Claims 2-8 are patentable at least by virtue of their dependency on claim 1.

In addition, dependent claim 2 recites: “wherein said second information comprising information representative of radio access capabilities of said mobile station.” Forssell does not disclose or suggest a request having a first information and adding the second information relating to the MS capabilities to the request. That is, Forssell does not disclose or suggest the Quality of Service information being the radio access capabilities of the MS. Livet fails to cure the deficient disclosure of Forssell. That is, in Livet, there is no request for a data session that would include the first information and add second information, known to the RMM, that relates to the radio access capabilities of the MS. In fact, the radio access capabilities of the MS are irrelevant to the RMM and its finite state machines. Accordingly, the combined disclosure of Forssell and Livet do not disclose or suggest the unique features of claim 2. For at least these additional exemplary reasons, claim 2 is patentable over the combined disclosure of Forssell and Livet.

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New Claims


In order to provide more varied protection, Applicant adds claims 13-18. Claims 13-18 are patentable at least by virtue of their dependency on claim 1, 9, or 11.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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